



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

Aug. 28, 2003

## NASA receives Columbia Accident Investigation Board report

*Editor's note: NASA Administrator Sean O'Keefe received the report of the Columbia Accident Investigation Board on Tuesday from board chairman, retired U.S. Navy Adm. Harold Gehman. The following is a statement from O'Keefe regarding the report.*

*NASA Headquarters release*

**O**n the day of the Columbia tragedy, NASA committed to the families of STS-107's crew that we would find the problems that caused this horrible accident, fix them, and return to the exploration objectives their loved ones dedicated their lives to. We have now completed the first phase of that important commitment.

"On Tuesday, Adm. Gehman presented the findings and recommendations



NASA Administrator Sean O'Keefe, left, accepts the Columbia report Tuesday from Adm. Hal Gehman, chairman of the Columbia Accident Investigation Board.

NASA/Bill Ingalls

of the Columbia Accident Investigation Board. The members have established what they believe to be the factors that contributed to the tragic loss of Columbia and her courageous crew.

"I want to express NASA's appreciation  
*See Report on page 2*

### ***President Bush issues statement on report***

**T**uesday the Columbia Accident Investigation Board released its report on the tragic accident that claimed the lives of seven brave astronauts. These men and women assumed great risk in service to all humanity. On behalf of a grateful Nation, I once again recognize their sacrifices and those of their loved ones. Their service will never be forgotten.

"Our Nation also owes its appreciation to Adm. Harold Gehman, Jr. as well as the other 12 members of the Columbia Accident Investigation Board. As Board Chair, Adm. Gehman and his team have worked tirelessly over the past seven months conducting an exhaustive review of the circumstances surrounding this accident. The next steps for NASA under Sean O'Keefe's leadership must be determined after a thorough review of the entire report, including its recommendations.

"Our journey into space will go on. The work of the crew of the Columbia and the heroic explorers who traveled before them will continue."

The Columbia Accident Investigation Board report on the STS-107 accident is available online at "Inside Marshall," [www.nasa.gov](http://www.nasa.gov) and at [www.caib.us](http://www.caib.us).

## Director King: Meeting challenges Marshall's 'highest priority'

*by David King*

*Marshall Center Director*

**T**he Columbia Accident Investigation Board, under the leadership of Adm. Hal Gehman, has released its findings regarding the STS-107 Columbia tragedy.

"The Columbia Accident Investigation Board did an outstanding job in its investigation, leaving no stone unturned. It was a long and arduous process for the Board and NASA will

forever be indebted to them for providing us with their valuable insight that will lead us to make important and necessary changes.

"They have presented us with a firm challenge: to fly the Space Shuttle safely in each and every future mission. I know that all of us here at Marshall Space Flight Center will do everything we can to meet that challenge. Safely returning the Shuttle to flight is the Center's highest priority and the Marshall Center is totally committed to it for STS-114 and beyond."

# Report

*Continued from page 1*

for the Board's report, which is timely, thorough, and direct. The efforts of all concerned with the investigation will help NASA improve the Space Shuttle program, our management processes, and our capability to safely return to flight.

"The findings and recommendations of the Columbia Accident Investigation Board will serve as NASA's blueprint. We have accepted the findings and will comply with the recommendations to the best of our ability. The Board has provided NASA with an important road map, as we determine when we will be 'Fit to Fly' again.

"Due to the comprehensive, timely and open public communication displayed by the Board throughout the investigative process, we already have begun to take action on the earlier issued recommendations, and we intend to comply with the full range of recommendations.

"Our 'Return to Flight' efforts are being led by NASA's Associate Administrator for Space Flight William Readdy and our Associate Deputy Administrator for Technical Programs Dr. Michael Greenfield. They will work closely with the independent Return to Flight Task Group, led by retired U.S. Air Force Lt. Gen. and former Apollo Cmdr. Thomas P. Stafford and former Space Shuttle Cmdr. Richard O. Covey. The 'Stafford-Covey Task Group' will independently assess every action NASA takes, as we return to flight operations.

"As an important step to change the culture of the Agency, we have created the NASA Engineering Safety Center (NESC) at the Agency's Langley Research Center in Hampton, Va., to provide comprehensive examination of all NASA programs and projects.



NASA/Bill Ingalls

**NASA Administrator Sean O'Keefe, left, and Columbia Accident Investigation Board member Scott Hubbard, right, discuss the report during a 'NASA Update' on Tuesday. Hubbard, director of Ames Research Center at Moffett Field, Calif., is the only NASA team member on the investigation board.**

The NESC will provide a central location to coordinate and conduct robust engineering and safety assessment across the entire agency. The NESC will play a key role in ensuring we return to flight safely and sustain a high level of engineering and safety excellence for every NASA program.

"The independent Columbia Accident Investigation Board performed an important service for the nation, for NASA, and for the dedicated families of Columbia's crew. The Board members conducted a thorough and comprehensive review of the mission and the entire Space Shuttle program. The Board's efforts to perform a timely and a complete investigation into the technological, engineering, managerial, and human aspects that contributed to the accident are nothing short of heroic in nature. We are grateful for their dedication."

## Marshall employees, retirees invited to Chandra symposium and banquet

*by Sherri Super*

**M**ore than 50 speakers, 80 poster presentations and attendance by scientists from all over the world will highlight next month's three-day symposium, "Four Years of Chandra Observations: A Tribute to Riccardo Giacconi."

Sponsored by the NASA Chandra X-ray Observatory Program, the event will be Sept. 16-18 at the Huntsville Marriott.

Giacconi, who will be honored at the symposium, will address attendees Sept. 16. Often called "the father of X-ray astronomy," in 2002 he received the Nobel Prize in physics for groundbreaking

contributions to astrophysics, leading to the discovery of cosmic X-ray sources. Currently president of Associated Universities, Inc. in Washington, D.C. and a research professor at Johns Hopkins University in Baltimore, he is one of the originators of the proposal that led to the creation of the Chandra Observatory.

Other speakers will discuss current Chandra results and additional research in the full range of high-energy astrophysics, shedding new light on black holes, distant galaxy clusters, and other celestial objects.

For Marshall Center employees and retirees unable to attend the symposium, but interested in mingling with fellow

scientists, engineers and others who helped make Chandra a success, there will be a banquet from 6-9 p.m. Sept. 17 at the U.S. Space & Rocket Center. It will offer the chance to socialize, tour the museum and hear Cady Coleman and Jeff Ashby, astronauts from the Space Shuttle STS-93 flight, discuss their 1999 mission that placed Chandra in orbit.

More information, including symposium registration details, is at:

<http://mi.msfc.nasa.gov/chandra/index.html>.

*The writer, employed by ASRI, supports the Media Relations Department.*

# Space Infrared Telescope Facility lifts off aboard Delta II

*Kennedy Space Center release*

**N**ASA's Space Infrared Telescope Facility successfully launched from Florida's Cape Canaveral Air Force Station on Aug. 24 aboard a Delta II launch vehicle.

Flying eastward over the Atlantic Ocean, the new observatory entered an Earth-trailing orbit at about 43 minutes after launch. Five minutes later, the spacecraft separated from the Delta's second and final stage. At about 64 minutes after take-off, the NASA Deep Space Network station in Canberra, Australia received the first data from the spacecraft.

"All systems are operating smoothly, and we couldn't be more delighted," said David Gallagher, project manager for the mission at NASA's Jet Propulsion Laboratory, Pasadena, Calif.

The last of NASA's suite of Great Observatories, the Space Infrared Telescope Facility will use infrared detectors to pierce the dusty darkness enshrouding many of the universe's most fascinating



Photo by Emmett Given, NASA/Marshall Center

## **U.S. Sen. Jeff Sessions visits Marshall**

Neil Otte, right, deputy manager for the External Fuel Tank program, explains Return to Flight efforts associated with foam insulation to U.S. Sen. Jeff Sessions, second from left, and Marshall Director David King, far left, at Marshall's National Center for Advanced Manufacturing facility. Sessions visited the Marshall Center last week.

objects, including brown dwarfs, planet-forming debris discs around stars and distant galaxies billions of light years away. Past Great Observatories include the Hubble Space Telescope, Chandra X-ray Observatory and Compton Gamma Ray Observatory.

The two-and-one-half to five-year mission is an important bridge to NASA's

Origins Program, which seeks to answer the questions: "Where did we come from? Are we alone?"

In-orbit checkout and calibration is scheduled to last 60 days, followed by a 30-day science verification period, after which the observatory is expected to begin its regular science mission.

## **Marshall's Space Transportation Directorate reaches safety milestone**

*By Grant Thompson*

**T**he Marshall Center's Space Transportation Directorate has reached a significant safety goal, logging 3 million work hours without a lost-time injury.

A lost-time injury is defined as an injury causing an employee to miss one or more days of work.

The last lost-time injury of a civil servant within the Space Transportation Directorate was in January 2000.

The directorate is a key leader in NASA's development of advanced space transportation, launch vehicle systems and in-space propulsion, and provides world-class propulsion and engineering expertise to NASA's Space Shuttle program. The organization includes nearly 500 civil service and 177 contractor employees at the Marshall Center, occupying 53 buildings, including propulsion testing areas, full-size rocket test stands and numerous laboratories.

"Safety is the top priority within NASA, and I'm glad the

Transportation Directorate and the people who support it realize that with this significant achievement, we are living examples of that priority," said Dennis Kross, director of the Space Transportation Directorate. "This is a real demonstration of our teamwork and commitment as we strive to make this a safe and healthy environment for everyone. This is just a sign we are doing our job and doing it well."

In April 2004, some of the directorate's employees are scheduled to move into the Propulsion Research Laboratory, now under construction at the Marshall Center. The 108,000-square-foot facility will provide office and laboratory space for propulsion research and small-scale experiments supporting lower cost, more efficient and safer access to space.

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Photo by Emmett Given, NASA/Marshall Center

### **Breaking ground for new security training facility**

Marshall team members get some help breaking ground last week for a new security training facility on Centaur Street at the south end of Rideout Road. The building will be used by the Marshall Center's Protective Services Department for training preparedness, education and responsiveness to protect the Center's workforce and assets. The building also will be used by other federal agencies, as well as state and local law enforcement personnel. Helping turn the first spades of soil for construction are, from left, Protective Services Department Manager Owen Johnson, Facilities Engineering Department Manager Edwin Jones, Marshall Center Director David King, Huntsville Mayor Loretta Spencer and Center Operations Directorate Director Sheila Cloud.

## **Obituaries**

**Theresa L. Breedlove, 82**, of Huntsville, died Aug. 14.

She retired from the Marshall Center in 1973 where she was an industrial property management specialist.

Breedlove is survived by one son, Alan W. Breedlove of Toney.

**Billy C. Hughes, 76**, of Charleston, S.C., died March 11.

Hughes was born Jan. 25, 1927, in Birmingham and was a U.S. Navy veteran of World War II. He worked in the Charleston Naval Shipyard Optical Shop. He was a charter member of the Marshall Center after coming to Huntsville in 1958 to work in the Astrionics Division, Gyro Section. He retired in 1978 and returned to Charleston where he was a member of Citadel Baptist Church. He worked with the Charleston County School District to implement the "Can Do" program to interest children in space and studying math and science.

Hughes is survived by his wife, Charlotte N. Hughes; two step-children; and two step-grandchildren.

## **Job Announcements**

**MS03C0173**, AST, Aerospace Flight Systems. GS-0861-13, Second Generation RLV Program Office, Flight Demonstrations Office. Closes Aug. 28. Contact: Patricia Caraway at 544-7755.

**MS03C0174**, Information Technology Specialist. GS-2210-13, Engineering Directorate, Structures, Mechanics and Thermal Design. Closes Aug. 29. Contact: Kevin Plank at 961-0157.

**MS03C0176**, Property Management Specialist. GS-1101-05, Center Operations Directorate, Logistics Services Department. Closes Sept. 2. Contact: Dana Blaine at 544-7514.

**MS03C0177**, Operations Support Specialist. GS-0301-12, Engineering Directorate, Office of the Director. Closes Sept. 3. Contact: Rita Evans-McCoy at 544-7507.

**MS03C0179**, Program Analyst. GS-0343-12, Science Directorate, Business Management Office. Closes Sept. 5. Contact: Debbie Longeddy at 544-2308.

**MS03C0181**, AST, Technical Management. GS-0801-13, Second Generation RLV Program Office, Program Planning and Control Office. Closes Sept. 8. Contact: Patricia Caraway at 544-7755.

## **Marshall Director David King invites Center team to annual Retiree Dinner**

**T**he 17th annual Marshall Retiree Dinner honoring employees who retired in 2002 will be Sept. 9, at the Von Braun Center.

All employees, retirees, and guests are invited and encouraged to attend.

As in previous years, I am sure this evening will be filled with fun and excitement. The event will begin at 5:30 p.m. with a cash bar social in the West Exhibit Hall, and dinner will be served at 7 p.m. in the North Hall.

This year, the entertainment promises another enjoyable evening of Marshall Center team member's talent. It is an excellent opportunity for fun and fellowship with other employees and retirees.

I hope that you will attend. Tickets may be purchased from administrative officers through noon Sept. 5. Reserved tables may be purchased from your administrative officer or Joe Drieling in Bldg. 4200, Room 322A.

Please join us in honoring the 2002 retirees and their guests. I look forward to seeing you there.

— **David A. King**  
**Marshall Center Director**

# Center Announcements

## SEE Program to host Spacecraft Charging Technology Conference

NASA's Space Environments & Effects Program will host the eighth Spacecraft Charging Technology Conference Oct. 20-24 in Huntsville. The conference is an international forum to present and discuss spacecraft charging issues and mitigation techniques. Registration is limited. For more information, go to <http://see.msfc.nasa.gov/sctc>.

## Spacecraft Preliminary Design course set for September

A three-day Spacecraft Preliminary Design course will be taught Sept. 15-17 by Dr. Wiley Laron and Tom Sarafin at the Marshall Center. Marshall team members interested in attending should submit a Form 59 to CD20 by Aug. 27. For more information, go to [www.instaengineering.com/uss.cfm](http://www.instaengineering.com/uss.cfm) or call 544-1164.

## Vacation specials available for Marshall team members

Executive Tour and Travel Services Inc., is offering \$99 vacation getaways to more than 20 destinations for Marshall civil servants, retirees, contractors and their families. The price includes three days and two nights hotel accommodation for two adults and up to two children age 12 or under. A deposit of \$99 plus \$6 for shipping and handling must be made by Aug. 28. Travel dates are good through August 2004. For more information, call Candy Kelley at 544-7565.

## Flag football teams organizing

Men's and women's flag football season will be starting soon. If you are interested in starting a team, call Dayna Schoffstoll at 544-4123 or Kathryn Kynard at 544-7439.

## LifeSouth monthly blood drives to begin in September

Beginning Sept. 12, the Huntsville LifeSouth Community Blood Center will be added to the Marshall Blood Drive Program. LifeSouth's monthly blood

drives will be on the second Friday of each month from 8 a.m.-1:30 p.m. at the Center Activities Bldg. 4316. The American Red Cross will continue to hold its blood drive at Marshall on the third Friday of each month. For more information, call Rick Wallace at 544-8885.

## Instrumentation Division

### Astrionics retirees meet Tuesday

Retirees and friends of the Instrumentation Division Astrionics Lab will meet at 11 a.m. Tuesday at the Redstone Golf Course coffee shop. For more information, call Tom Escue at (256) 232-1549.

## NASA Exchange Space Shop closed Friday

The NASA Exchange Space Shop will be closed Friday and will reopen Tuesday.

## MARS Tennis Club Closed Hi-Lo Doubles Tournament is Sept. 6

The MARS Tennis Club Hi-Lo Doubles Tournament will be Sept. 6. Warm-up begins at 8 a.m. with tournament play at 8:30 a.m. Players will be matched with a doubles partner at the tournament. The closed tournament is for members only. If you plan to participate, or for more information, call Bill Boglio at 544-3806.

## New requirements for support of special events

Marshall Center organizations planning a special event either on or off the Center requiring Marshall services must initiate the request via the Web-based Service Request System on Inside Marshall. Go to One-Stop-Shop, then Service Request System, Special Event Services. Please submit requests as far in advance as possible, but at least 10 working days prior to the event. Organizations are required to fund the services requested. For more information, call Craig Young at 544-3239.

## Society of Women Engineers planning Sept. 17 meeting

The Society of Women Engineers is planning a Sept. 17 meeting. For more information, call Helen Stinson at 544-7239.

## Proposal production assistance available

The Center Operations Directorate's Proposal Production Team (PPT) is available for assistance in preparing proposals. The PPT can schedule coordination, guidelines, text editing, figure and table production, layout, camera-ready art and coordinate printed products. For more information, go to <http://co.msfc.nasa.gov/ad03/graphics/proposal.html> or call 544-4852, 544-4580 or 544-4741. The PPT is in Bldg. 4200, Room G-28.

## NASA Ski Week set for January

The 13th annual NASA Ski Week will be in Steamboat, Colo., Jan. 24-31, 2004. Skiers from nine NASA centers will participate in winter sports and camaraderie at the 3,000-acre resort. All Marshall team members, retirees and family members, are eligible to participate. For more information, call 233-0705 or e-mail [tom.dollman@nasa.gov](mailto:tom.dollman@nasa.gov).

## Marshall Family Fun Day is Sept. 20

The annual Marshall Family Fun Day will be 10 a.m.-2 p.m. Sept. 20 at the MSFC Picnic Grounds. A 5K run begins at 8 a.m. followed by a children's parade at 9:45 a.m. All Marshall team members, retirees and their families are invited.

## JANNAF Propulsion Meeting abstracts and papers due Sept. 1

Abstracts and papers for the 52nd Joint Army-Navy-NASA-Air Force Propulsion Meeting and for the first Liquid Propulsion Subcommittee Meeting are due Sept. 1. Abstracts can be submitted by e-mail to [dse@jhu.edu](mailto:dse@jhu.edu). The meetings will be May 10-14, 2004, in Las Vegas. For information, call (410) 992-7300, ext. 202.

# Classified Ads

## Miscellaneous

- ★ Ludwig snare drum, old, works. Stand OK, not great, works. \$95 OBO. 306-0700 Decatur
- ★ Viking-Rose sewing machine, embroidery unit included, \$700. 881-3353
- ★ Frog costume, adult/medium, \$25; wedding gown, white, sleeveless, sweep train, size 8, \$250. 509-6590
- ★ Hogdon International Clays smokeless powder, 8 lb. can, \$60; Ryobi 8.25" radial arm saw, \$75. 651-1085
- ★ 1997 Viking Popup, a/c, sleeps six, extras, \$3,500. 256-828-7013
- ★ 1996 SeaDoo Xp, moving, must sell, many extras, \$4,000. 256-572-1197
- ★ King size Select Comfort bed w/frame, \$750. 256-464-7876
- ★ Remington 742BDL, .30-06, QD swivels, sling, scope mount, five boxes ammo, spare magazine, \$450. 881-5043
- ★ Flomaster 70 series muffler, 2 in, 2 out, two 3.5" chrome exhaust tips, \$50. 830-5783
- ★ Century stroller, \$25; Gerbil cage w/accessories, \$10. 881-4148
- ★ UUC Motorwerks transmission, bushings/tranny mount enforcer kit for BMW E46 manual, \$70. 256-922-1424
- ★ Four Alabama vs. South Florida football tickets, Birmingham game, Aug. 30, \$30 each. 859-4338
- ★ Kitchen cabinet doors, painted wood, louvered/non-louvered w/hardware, \$5 each, \$150 for 37. 256-881-5736
- ★ Two tickets, Huntsville Symphony Orchestra performance, Sept 20, center seats, Row Q, \$42 each. 256-722-7927
- ★ MacGregor golf bag, black vinyl w/silver trim, \$30. 533-4824
- ★ TV wall mount stands, \$25; women's 3-speed bicycle, \$20; king-size waterbed w/mattress, heater, \$150. 837-2223
- ★ Free-standing Fisher wood heater, can use like fireplace, \$150. 256-729-6493
- ★ Valley pool table, 7', slate top, \$500. 885-5973
- ★ Girl's bedroom furniture: 6-drawer dresser, mirror, desk, hutch, bookcase, nightstand, light wood, \$600. 922-9294
- ★ Clarinet, student model w/case, \$100. 658-5855
- ★ Pedestal table, 48" round oak, \$150; Century stroller w/infant seat, two car bases, \$55. 776-6943
- ★ Bear Whitetail EL compound bow, 60-lb. pull, 30" draw w/sights, quiver, hard case, \$200. 851-8085
- ★ PC, 233MHz, 32MB, 4.3G hard drive, 15" monitor; Canon printer, \$100. 772-4984
- ★ Spinnet Lowrey organ, "Holiday" model, 44.5w x 22.5d x 35h, bench & owner's manual, \$352. 881-

## New classified ad guidelines

- ✍ Classified ads due no later than noon Mondays, limit 15 words, including home phone number of seller. Only one phone number allowed per ad. Ads are subject to editing for length and clarity.
- ✍ Civil servants, contractors and Marshall retirees may run ads at no charge. No ads for real estate, timeshares or for goods and services manufactured or provided as a home occupation or business.
- ✍ Ads may be submitted by e-mail to [intercom@msfc.nasa.gov](mailto:intercom@msfc.nasa.gov). Electronic forms for onsite Marshall team members are on "Inside Marshall." Go to "Employee Resources" to

find the form, or to the "News Sources" tab, click "MSFC News" and "Submit Marshall Star Classified Ad."

- ✍ Classified ads can be mailed to: Marshall Internal Relations and Communications Department, CD40, Bldg. 4200, Room 101, Marshall Space Flight Center 35812
- ✍ Organization codes and work phone numbers should be included for clarification. Retirees should include their former org code or department name.
- ✍ Ads must be resubmitted weekly. Ads cannot be submitted by phone.
- ✍ For more information, call Janie Crawford at 544-0514.

6858

- ★ 1994 Yamaha 750 Virago motorcycle, 8,300 miles, new tires, garage kept, \$3,500. 256-379-4855
- ★ Pine dresser w/two nightstands, dark finish, \$80. 256-714-8580
- ★ Three fine quality collector chess sets, \$250, \$750 and \$2,500. 656-5628

## Vehicles

- ★ 2000 Mazda 626, 4-door, 41K miles, silver w/gray interior, PS/PB/PW/PL, CD/ cassette, a/c, \$9,950. 256-230-0806
- ★ 1997 Nissan pickup XE, 4x4, 4-cyl., 5-speed, \$5,750. 325-6000
- ★ Mazda Protégé, red, 5-speed, polished wheels, sunroof, adult-owned, 19K miles, \$13,000. 721-6572
- ★ 2001 Mustang GT wheels, four, silver, 17x9, \$250. 772-6949
- ★ 1998 Mustang GT factory rims, 16", 5-spoke, \$150 for four. 721-3945
- ★ 1995 GMC Serria Z71, ext. cab, loaded, garage kept. 931-937-6518
- ★ 1995 Dodge Caravan SE, automatic, 163K miles, blue w/gray interior, V6, \$2,500. 256-880-3337
- ★ 1997 Ford Explorer XLT, dark green, 4-door, 2-wheel drive, most options, \$5,800. 830-9698
- ★ 1991 Ford Taurus station wagon, 142K mile, auto, new radiator, \$500. 883-1468
- ★ 1996 Chrysler Town & Country, white, 77.5K miles, 4-door, leather, rear air, \$6,790. 256-796-2087
- ★ 1997 Lincoln Town Car, Signature, white w/ cordovan leather interior, 61K miles, \$10,000 firm. 256-536-0311
- ★ 1989 Honda Accord LXI, 140K miles, 5-speed, all-power, AM/FM cassette, alloy wheels, a/c, \$2,500. 256-766-9348
- ★ 1986 Ford Thunderbird Coupe, 4-door, 53K miles,

maroon, \$2,100. 256-774-1684

- ★ 2001 Chrysler Concorde, LXI, leather, tape player, 47K miles, \$14,495. 828-4251
- ★ 1998 Nissan Pathfinder, automatic, 4-WD, leather, Bose CD/stereo, new tires, \$11,900. 881-3787
- ★ 1992 Acura Integra LS, 5-speed, hatchback, 114K miles, \$3,000. 683-2390
- ★ 1998 Ford Ranger XLT, ext. cab, 4-cyl., 5-speed, CD/AM/FM, 50K miles, \$8,500. 882-5363

## Wanted

- ★ Full/queen size bed, good condition, \$90-\$125. 656-7349
- ★ Ping-pong table in excellent condition. 533-5942
- ★ Hardtop and mounting hardware for 1999 Mazda Miata. 256-534-5175 after 5 p.m.
- ★ Small trailer, 4x8 or 5x10, or fixer upper, to haul riding mower. 852-1330

## Found

- ★ Prescription eyeglasses, in front of Bldg. 4250. Call 544-7845 to identify

## Free

- ★ Maple wood for burning, cut into 16" lengths in May, needs splitting. 534-6376
- ★ Free to good home, 1-year-old male beagle, all shots, playful, loves children. 430-0759
- ★ Sept. 11 NYC refugee dog needs home, sweet, intelligent, too big for yard. 682-1431

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